



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,444	08/26/2003	Robert J. Higgins	CM06299J	5765

7590 06/30/2004  
Barbara R. Doutre  
Motorola, Inc.  
Law Department  
8000 West Sunrise Boulevard  
Fort Lauderdale, FL 33322

EXAMINER
----------

NGUYEN, PHUONGCHI T

ART UNIT	PAPER NUMBER
----------	--------------

2833

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/649,444	Applicant(s) HIGGINS, ROBERT J.	
	Examiner Phuongchi Nguyen	Art Unit 2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Objections*

1. Claims 7 and 10 are objected to because of the following informalities:

Claim 7, lines 10-11, “ prior to the detect pin” is missing text; also, the text is missing between “disconnecting” and “after the detect pin”.

Claim 10 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 7.

When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 1- 3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsushita (US4849944)

In regarding to claim 1, Matsushita discloses (figure 3) a connector, comprising a plurality of contacts (10, 11, 13, 12) including

a supply contact (one of 13) (column 4, lines 7-10),

a ground contact (10) and

at least one other contact (11, 12);

the supply (one of 13) and ground contacts (10) being longer than the at least one other contact (11, 12); and the at least one other contact (11, 12) used to provide attach/detach detection for the connector (column 4, lines 53-56).

In regarding to claim 2, Matsushita discloses (figure 3) the connector, comprising power supply contacts (one of 13) having a first predetermined length (of 13); and at least one other contact (11, 12) having a second predetermined length (of 11, 12), the second predetermined length (of 11, 12) being shorter than the first predetermined length (of 13) and the at least one other contact (11, 12) used to provide attach/detach detection for the connector (column 4, lines 53-56).

In regarding to claim 3, Matsushita discloses (figure 3) the connector interfaced system, comprising a first connector (1) having power contacts (one of 20)(since one of 20 connect to one of 13 and column 4, lines 53-56); a second connector (8) for attaching and detaching to the first connector (1), the second connector (8) having corresponding power contacts (one of 13) for mating with the power contacts (one of 20) of the first connector (1), the second connector (8) having another contact (11, 12) for indicating attachment and detachment to the first connector (1) (column 4, lines 53-56).

In regarding to claim 6, Matsushita discloses (figure 3) the connector interface system wherein the first connector (1) is coupled to logic circuitry (2) that detects (when terminal 7 connects to terminals 11 and 12) the presence of the second connector (8) (Column 5, lines 5-8 and 34-37).

***Claim Rejections - 35 USC § 103***

Art Unit: 2833

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsushita (US4849944) in view of Faull (US6677772B1).

In regarding to claim 4, Matsushita discloses (figure 3) a connector interface system (8, 1) comprising the first connector contacts (5, 7, 20) and the second connector contacts (10, 11, 13, 12) of various lengths (figure 3). Nishizawa et al lacks the first connector contacts to be planar contacts corresponding to the second connector contacts to be telescoping spring loaded contacts. However, Faull teaches (figures 3 and 5) the first connector contacts (45) to be planar contacts (contact pads) and the second connector contacts (pogo spring) to be telescoping spring-loaded contacts. It would have been obvious to one having ordinary skill at the time the invention was made to modify the first and second contacts of the first and second connector of Matsushita to be a planar contacts and telescoping spring contacts as taught by Faull for having a quick engaging and disengaging between the first and second connectors.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsushita (US4849944) in view of Sadler (US6058319).

In regarding to claim 5, Matsushita discloses (figure 3) a connector interface system (1, 8), comprising the first connector contacts (5, 7, 20) and the second connector contacts (10, 11, 12, 13) of various lengths. Matsushita lacks the first connector contacts to be the recessed. However, Sadler teaches the first connector contacts (124) are recessed and the second connector corresponding contacts (122) are pins (figure 7). It would have been obvious to one having

ordinary skill at the time the invention was made to modify the first contacts of the first connector of Matsushita to be recessed as taught by Sadler for having a different type of contact terminals.

7. Claim 7-12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishizawa et al (US6669487B1) in view of Matsushita (US4849944).

In regarding to claims 7 and 10, Nishizawa et al discloses (figures 5 and 13) an interface system for a communication device, the interface system (20, MFC) comprising a communication device connector (20); an accessory connector (MFC) for mating with the communication device connector (20). Nishizawa et al lacks the supply pin and the ground pin connecting to the mating device connector prior to the detect pin. However, Matsushita teaches the accessory connector (8) (figure 3) comprising a supply pin (one of 13); a detect pin (11, 12) (pins 11 and 12 are the detect pins when pins 11 and 12 connect to pin 7); a ground pin (10); the supply pin (one of 13) and the ground pin (10) connecting to the mating device connector (1) prior to the detect pin (11, 12) when the accessory connector (8) is mated with the mating device connector (1), and the supply pin (one of 13) and the ground pin (10) disconnecting after the detect pin (11, 12) when the accessory connector (8) is removed from the mating device connector (1). It would have been obvious to one having ordinary skill at the time the invention was made to modify the contact pins of Nishizawa et al by providing a different length of the pins of Matsushita for having the supply pin and the ground pin connecting to the mating device connector prior to the detect pin to detect potential signal contacts.

In regarding to claims 8 and 11, Nishizawa et al discloses the invention, but lacks the logic circuitry that senses attachment and detachment of the accessory connector. However,

Art Unit: 2833

Matsushita teaches the mating device (1) comprises logic circuitry (2) that senses attachment and detachment of the accessory connector (8) to the mating device connector (1) through the detect pin (7, 11, 12) (when 7, 11, 12 are correspondingly connecting together). It would have been obvious to one having ordinary skill at the time the invention was made to provide on the mating device of Nishizawa et al the logic circuitry as taught by Matsushita for sensing attachment and detachment of the accessory connector during assembly.

In regarding to claims 9 and 12, Nishizawa et al discloses (figure 5) the interface assembly wherein the communication device (20) comprises a radio (since the communication device is a cellular phone which is inherently include a radio).

8. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishizawa et al (US6669487B1) in view of Matsushita (US4849944) and Faull (US6677772B1).

In regarding to claims 13 and 14, Nishizawa et al discloses (figures 5 and 13) an interface system for a communication device, the interface system (20, MFC) comprising a communication device connector (20); an accessory connector (MFC) for mating with the communication device connector (20). Nishizawa et al lacks pogo pin and a different length on the pins. However, Faull teaches (figures 3 and 5) a contact is formed of pogo pins; and Matsushita teaches (figure 3) the plurality of contacts (10, 11, 21) including power contacts (one of 13) (column 4, lines 7-10) and at least one other contact (11, 12); and the power contacts (one of 13) having a first predetermined length (of 13) of accommodation and the at least one other contact (11, 12) having a second predetermined length (of 11, 12) of accommodation shorter than the first (length of 13); and the at least one other contact (11, 12) serially detaching from a corresponding mating contact (5, 7, 20) of the mating device (1) prior to the power contacts (one

of 13) (figure 3). It would have been obvious to one having ordinary skill at the time the invention was made to modify the contact of Nishizawa by having a pogo pin as taught by Faul for having a quick engaging and disengaging between the connector and the mating connector; and by providing a different length on the pins of Matsushita for having the supply pin and the ground pin connecting to the mating device connector prior to the detect pin to detect potential signal contacts.

In regarding to claim 15, Nishizawa et al discloses the power contacts (22 Vdd) accommodate sources from the communication device (20) capable of generating a spark (any power contact connecting to DC power supply is cable of generating parks).

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kita (US6263218B1), Kim et al (US6397087B1), Carroll et al (US6509659B1) are cited to show in the interface system having supply, detect and ground contacts. Bertoncini et al is cited to show various length contacts.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuongchi Nguyen whose telephone number is (571) 272-2012. The examiner can normally be reached on 8:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley can be reached on (571) 272-2800 ext 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2833

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PCN

June 23, 2004

*P. Bradley*  
P. AUSTIN BRADLEY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800